

## BARBERING

### 4 Quarters

A barber is often thought of as a person who just cuts hair. But with the rapidly increasing interest in total male grooming, many contemporary barbers now provide a wide variety of service for customers. These services include: hairstyling, hair coloring, shampoos, hair and scalp treatment, facials, shaves, and trimming beards and mustaches. The recommending and selling of grooming aids are important collateral services. Through specialized knowledge and an up-to-date awareness of current trends, a barber can suggest hair styles to suit individual customers. Advice can also be given on treatment and cure of hair and scalp problems.

## BARBERING

### First Quarter

BAR 111 - Theory I  
BAR 161 - Practical I  
BAR 162 - Clinic I

### Second Quarter

BAR 121 - Theory II  
BAR 171 - Practical II  
BAR 172 - Clinic II

### Third Quarter

BAR 131 - Theory III  
BAR 181 - Practical III  
BAR 182 - Clinic III

### Fourth Quarter

BAR 141 - Theory IV  
BAR 191 - Practical IV  
BAR 192 - Clinic IV

## BARBERING COURSE DESCRIPTIONS

### BAR 111-Theory I

This course consists of basic practical theory, orientation, care and use of tools, personal hygiene, set-ups for shampooing and haircutting, bacteriology, sterilization and sanitation.

### BAR 161-Practical I

The basic application of draping or set-up, shampooing, haircutting, use of tools, and sterilization and sanitation procedures.



**BAR 162-Clinic I**

With live work, students are involved in practical procedures and products.

**BAR 121-Theory II**

This course involves practical theory in anatomy and physiology, shaving, haircutting and styling, scalp and hair treatments, facials, skin and appendages.

**BAR 171-Practical II**

This course consists of practical application in shaving, haircutting, hair-do in treatments and facials.

**BAR 172-Clinic II**

This course consists of intermediate application of theory and practical procedures and products.

**BAR 131-Theory III**

During this course students will be studying common skin diseases, electricity and light therapy, elementary chemistry, hairstyling, shaving.

**BAR 181-Practical III**

This course covers practical application of shaving, electricity and light therapy advance haircutting and styling.

**BAR 182-Clinic III**

Students practice on live models.

**BAR 141-Theory IV**

In this phase of training the student will study hair and scalp analysis and treatments, techniques of specialized haircutting and styling, shop management and business practices, hair coloring and perming.

**BAR 191-Practical IV**

The student begins advanced application of hair coloring, perming, hair and scalp analysis and treatments, haircutting and styling.

**BAR 192-Clinic IV**

This phase of the course prepares the student with experiences he will face on the job. They are working independently and on live models.



## BODY AND FENDER REPAIR

### 8 Quarters

This course is designed to train students to repair damaged bodies and body parts of automotive vehicles, such as automobiles and light trucks. A student learns to examine damaged vehicles and estimate cost of repairs, remove upholstery, accessories, electrical and hydraulic window-and-seat operating equipment, and trim to gain access to vehicle body and fenders. He also gains skills in straightening bent frames using hydraulic jack and pulling devices. He learns to straighten, file, grind, and sand repaired surfaces using power tools and hand tools, and to refinish repaired surface after performing body repairs.

## BODY AND FENDER REPAIR

### First Quarter

BF 111 - Orientation

BF 112 & 162 - Safety & Safety Lab

BF 113 & 163 - Oxyacetylene Welding & Oxyacetylene Welding Lab

BF 114 & 164 - Arc Welding & Arc Welding Lab

### Second Quarter

BF 121 & 171 - Sheet Metal Repair & Sheet Metal Repair Lab

### Third Quarter

BF 131 & 181 - Panel Replacement & Panel Replacement Lab

BF 132 & 182 - Panel Alignment & Panel Alignment Lab

### Fourth Quarter

BF 141 & 191 - Electrical Systems & Electrical System Lab



### Fifth Quarter

BF 211 - Estimating  
BF 212 - Damage Reporting

### Sixth Quarter

BF 221 & 271 - Refinishing and Painting & Refinishing and  
Painting Lab

### Seventh Quarter

BF 231 & 281 - Glass Replacement & Glass Replacement Lab  
BF 232 & 282 - Frame Straightening & Frame Straightening Lab

### Eighth Quarter

BF 242 & 292 - Fiberglass Repair & Fiberglass Repair Lab

## Body And Fender Repair Course Descriptions

### BF 111-Orientation

An introductory course that gives a summary of the program with emphasis on objectives and requirements. Students are acquainted with shop rules and the job opportunities available in body and fender repair.

### BF 112 & 162-Safety & Safety Lab

Students are taught how to correctly identify and use all tools and equipment that will be used in the shop. Safety practices are demonstrated and stressed for the protection of the individual student as well as the class as a whole.

### BF 113 & 163 - Oxyacetylene Welding & Oxyacetylene Welding Lab

An indepth study of welding outfits. Students receive practical experience in disassembling, inspecting, assembling and maintenance. Safety is emphasized.

### BF 114 & 164 - Arc Welding & Arc Welding Lab

This course is a comprehensive theory and shop experience which concentrates on the fundamentals needed in running beads, welding square grooves, vee groove joints, cutting, etc.



### **BF 121 & 171-Sheet Metal Repair & Sheet Metal Repair Lab**

This course deals with the basic hand power tools that are used in the repairing of distorted sheet metal. Students are acquainted with the basic characteristics of sheet metal and the practical application of these characteristics to the repair procedure.

### **BF 131 & 181-Panel Replacement and Panel Replacement Lab**

This course covers the procedures and principles utilized in replacing bolt-on and weld-on panels. A study is also made of the methods used in removing, replacing and installing interior/exterior trim and hardware. Practical applications are made on live work projects that are brought into the shop.

### **BF 132 & 182-Panel Alignment and Panel Alignment Lab**

This course explains the purpose of diagonal checking and carries the student through the phases of alignment procedures with hands on demonstrations.

### **BF 141 & 191-Electrical Systems and Electrical Systems Lab**

Diagnosis of problems by visual inspection and testing procedures.

### **BF 211-Estimating**

A detailed study in using collision guides with emphasis on computing overlap and special charges.

### **BF 212-Damage Reporting**

A study of reference materials used in determining repair and replacement costs for damaged vehicles.

### **BF 221 & 271-Refinishing and Painting & Refinishing and Painting Lab**

This course teaches the student how to paint and refinish the bodies of cars and trucks and the interior parts attached to it. It includes a study of painting supplies, equipment such as spray guns, preparing the surface, painting problems and safety elements.

### **BF 231 & 281-Glass Replacement & Glass Replacement Lab**

This course teaches the student how to remove and replace



stationary glass in vehicles. This includes windshield, rear windows and side windows. Students will apply knowledge learned in the classroom to actual live work projects that are brought into the shop.

### **BF 232 & 282-Frame Straightening & Frame Straightening Lab**

A theory of lab class where students are taught the basic principles of frame construction and repair. The course will teach students how to identify, select and demonstrate the use of tram and centering gauges; stationary and portable frame alignment equipment will also be included.

### **BF 242 & 292-Fiberglass Repair & Fiberglass Repair Lab**

This advanced course describes the procedures used in repairing body parts constructed of fiberglass. A study is made of the characteristics of fiberglass bodies and repair materials. Practical applications are carried out in the lab through specialized shop activities and live work brought into the shop.



## CARPENTRY

### 6 Quarters

The instructional program is divided between classroom theory and shop practice. Course content consists of safety, use and care of hand tools and power equipment, and the application of common building materials. Instruction includes foundations, exterior finishing, roof framing, blueprint reading, estimating materials, related mathematics and communication.

During the next few years, the growth of building construction will result in an increasing demand for construction of homes, schools, churches, stores, public institutions, and many types of buildings and recreational facilities.

When training is completed, the carpentry graduate will be qualified for a broad range of job opportunities such as supervisor, foreman, inspector, and contractor. For those who have the ability and are willing to work, the field of carpentry is unlimited.

## CARPENTRY

### First Quarter

CRP 111 - Orientation and Shop Safety  
 CRP112 & 162 - Cutting, Shaping and Fastening  
 CRP 113 & 163 - Building Site Preparation & Building Site  
 Preparation Lab.

### Second Quarter

CRP 121 & 171 - Concrete Forms & Concrete Forms Lab  
 CRP 122 & 172 - Floor Framing & Floor Framing Lab  
 CRP 123 & 173 - Wall Framing & Wall Framing Lab

### Third Quarter

CRP 131 & 181 - Roof and Ceiling Framing I and Roof and Ceiling  
 Framing Lab I  
 CRP 132 - Blueprint Reading I



#### Fourth Quarter

CRP 141 - Materials and Ordering

CRP 182 - Roofing Lab

#### Fifth Quarter

CRP 211 & 261 - Exterior Finishing & Exterior Finishing Lab

CRP 212 & 262 - Interior Finishing & Interior Finishing Lab

#### Sixth Quarter

CRP 221 & 271 - Stair Construction

CRP 223 - Blueprint Reading II

### CARPENTRY COURSE DESCRIPTIONS

#### **CRP 111-Orientation and Shop Safety**

Students receive information on shop procedures, history of carpentry, books and tools required and the future employment outlook for the program. Safety regulations are outlined and students are taught the proper uses and operations of hand and power tools and equipment.

#### **CRP 112 & 162-Cutting, Shaping, and Fastening**

A detailed study of measuring, cutting, shaping and assembling lumber. Practical applications are demonstrated in the shop to support the principles taught.

#### **CRP 113 & 163-Building Site Preparation & Building Site Preparation Lab**

This course will provide the student with the basic skills of locating property lines, setting grade stakes, excavating and building layouts.

#### **CRP 121 & 171-Concrete Forms and Concrete Forms Lab**

This course teaches the student how to prepare forms to hold concrete and other materials until solidification takes place and proper removal of same. A general knowledge with practical applications of anchor framing for special openings will also be given.



**CRP 122 & 172-Floor Framing & Floor Framing Lab**

A study of the technical language used in floor framing. Students explore the parts of floor framing and installation practices.

**CRP 123 & 173-Wall Framing & Wall Framing Lab**

This course provides the student with general knowledge of wall framing parts, terms, and various methods of framing for walls and openings. This knowledge is applied in the shop and on live work projects.

**CRP 131 & 181-Roof and Ceiling Framing I & Roof and Ceiling Framing Lab I**

This is a combination theory/lab course where students learn to define terms, label parts, identify and construct various type of roofs and ceilings.

**CRP 132-Blueprint Reading I**

This course presents a general knowledge of drafting, building symbols, specifications and building codes.

**CRP 141-Materials and Ordering**

This course is designed to teach the students how to recognize and classify the various types of materials used in the building process. A special segment is devoted to estimating building materials and placing orders.

**CRP 182-Roofing Lab**

This course allows the student to apply theory lessons in CRP 131 to advanced live work projects. The student receives training in the installation of various roofing materials used in residential construction.

**CRP 211 & 261-Exterior Finishing & Exterior Finishing Lab**

This course offers the student a variety of methods for installing exterior finishing materials. Students explore the use of oil-based or latex finishes, sealers and top coats, and the stucco process. Specialized lab experience is received through assigned projects and live work in the community.

**CRP 212 & 262-Interior Finishing & Interior Finishing Lab**

This course provides the student with an opportunity to study



a variety of inside construction jobs such as finishing paneling and installing sheetroc, windows, door trims, ceiling moulding, etc. This study is applied to live work projects where the student combines theory and good safety practices for the purpose of becoming more skilled and professional in the various types of interior construction.

### **CRP 221 & 271-Stair Construction**

Acquaints the student with the major components of stair construction. Included are design, layout, cutout, computations, and a study of related definitions. Practical application assignments are carried out in the shop.

### **CRP 223-Blueprint Reading II**

A continuation of CRP 132. This course allows the student to become more proficient in interpreting blueprints.



## COMMERICAL SEWING AND TAILORING

### 6 Quarters

Commercial Sewing is an intergrated treatment of the basic techniques of the needle trades by hand and machine which embraces dressmaking, tailoring, fashion designing, and related sewing fields. The course is designed to train men and women for entrance into and progress in the needle trades to develop skills in simple and complicated sewing for the family, home, factory, and the commercially self-owned dress or tailor shop. Although the course content may be directed more specifically toward one phase than another, it establishes a basic foundation for many job classifications.

### COMMERCIAL SEWING COURSE DESCRIPTIONS

#### First Quarter

- CS 111 - Orientation and Safety
- CS 113 - Commercial Machine Operation
- CS 114 - Basic Seams and Seam Finishes
- CS 115 - Trade Technology
- CS 116 - Skirts and Ladies Pants Construction
- CS 117 - Shop Mathematics

#### Second Quarter

- CS 121 - Blouses and Shirts Construction
- CS 122 - Commercial Machine Operation
- CS 123 - Home Machine Operation

#### Third Quarter

- CS 131 - Dressmaking
- CS 132 - Commercial Machine Operation
- CS 133 - Alterations and Fitting



#### Fourth Quarter

CS 141 - Men's Trousers, Slacks, and Shorts

CS 142 - Lingerie

CS 143 - Commercial Machines

#### Fifth Quarter

CS 211 - Garment Construction-Ladies Jackets, Coats, and Vests

CS 212 - Commercial Machines

#### Sixth Quarter

CS 221 - Garment Construction - Men's Suits and Top Coats

CS 222 - Complex Alterations

CS 223 - Commercial Machines

### COMMERCIAL SEWING COURSE DESCRIPTIONS

#### **CS 111-Orientation and Safety**

Historical background and important facts about the needle trades; general safety regulations; shop organization and management; types of tools and equipment and how to care for and use them safely and efficiently.

#### **CS 113-Commercial Machine Operation**

Covers the identification of parts and the care of the straight stitch and overlock machines; safety regulations for sewing machine operators; threading the machines and making minor adjustments. Practical application on skirts and pants.

#### **CS 114-Basic Seams and Seam Finishes**

Acquiring speed, accuracy and control in stitching; theory and practical application used in the construction of basic seams and seam finishes.

#### **CS 115-Trade Technology**

Theoretical and practical application of grain, unit construction and other trade terminology.

#### **CS 116-Skirts and Ladies Pants Construction**

Taking measurements for skirts and pants; pattern and fabric



selection; pattern and fabric preparation; pattern layout and cutting; construction details; finishing details; basic hand stitches; garment fitting and necessary alterations.

### **CS 117-Shop Mathematics**

Multiplication, addition, subtraction and division of whole numbers and fractions; reading measuring devices; business mathematics.

### **CS 121-Blouses and Shirts Construction**

Taking measurements for blouses and shirts; pattern and fabric selection; layout and cutting; construction details; assembling, finishing details; fitting and necessary alterations; acquiring speed, accuracy and control in stitching.

### **CS 122-Commercial Machine Operation**

Orientation to button-sewing machine; safety procedures involving machine operation. Practical application of machine on blouses and shirts.

### **CS 123-Home Machine Operation**

Orientation to zig-zag sewing machine for buttonhole construction. Practical application on blouses and shirts.

### **CS 124-Communication Skills**

Vocabulary building and spelling; using the dictionary; using word power.

### **CS 131-Dressmaking**

Body measurements; pattern and fabric selection; layout and cutting; construction details; assembling; fitting and necessary alterations; finishing details; pressing; pattern restyling; acquiring speed, accuracy, and control in stitching.

### **CS 132-Commercial Machine Operation**

Orientation to blindhemmer. Safety procedures and practical application on dresses.

### **CS 133-Alterations and Fitting**

Lengthening and shortening pattern and garment alterations; reducing and enlarging pattern and garment alterations; repairs.

### **CS 141-Men's Trousers, Slacks, and Shorts**

Proper measurement procedures; related theory and technical terms; commercial and drafted patterns; layout and



cutting; construction of details including but not limited to welt, bound, and slot pockets. Finishing details; fitting and necessary adjustments; hand and machine pressing; acquiring speed, accuracy, and stitch control.

### **CS 142-Lingerie**

Patterns; grain, layout, and cutting procedures; laces elastics and trims; construction details of panties, girdles, boxer shorts, half and/or whole slips, gowns, and pajamas; acquiring speed, accuracy, and stitch control.

### **CS 143-Commercial Machines**

Orientation of bar tack machine; threading and safety procedures, practical application to men's trousers.

### **CS 211-Garment Construction-Ladies Jackets, Coats, and Vests**

Selection of style or model design; commercial and drafted patterns; tailoring techniques; pattern layout; construction details; fittings and adjusting; finishing details; pressing-off; acquiring speed, accuracy, and stitch control.

### **CS 212-Commercial Machines**

Orientation of Reese Buttonhole Machine; threading and safety procedures; practical application on jackets and vests.

### **CS 221-Garment Construction-Men's Suits and Top Coats**

Selection of style or model design; commercial and drafted patterns; tailoring techniques; layout and cutting; construction details; fitting and adjusting; finishing details; pressing-off; acquiring speed, accuracy and stitch control.

### **CS 222-Complex Alterations**

Coordinating Basic Principles with Manipulative Techniques.

### **CS 223-Commercial Machines**

Orientation of Double Chain Stitch Machine; threading and safety procedures; practical applications of seams on different fabrics.



## GRAPHIC ARTS

### 6 Quarters

A complete course in printing is conducted by the Graphic Arts Department for the purpose of helping individuals develop careers in one of the nation's largest industries. Graduates of this course have a thorough knowledge of the principles, techniques, and equipment that are employed in the printing trade and the skills necessary to translate that understanding into finished copy.

Graphic Arts students receive extensive training in each of the six major areas of the printer's trade. Composition, Camera Processes, Layout Procedures, Platemaking, Printing Presses, and Bindery Processes.

## GRAPHIC ARTS

### First Quarter

GA 111 & 161 - Shop Safety and Orientation & Shop Safety and Orientation Lab

GA 112 - Beginning Typewriting

GA 113 & 163 - Type Composition and Proofreading & Type Composition and Proofreading Lab

GA 114 & 164 - Design, Layout and Job Composition & Design, Layout and Job Composition Lab.

### Second Quarter

GA 121 & 171 - Offset Presswork I & Offset Presswork Lab I

### Third Quarter

GA 131 & 181 - Camera and Developing I & Camera and Developing Lab I

GA 131 & 181 - Offset Presswork II & Offset Presswork Lab II

### Fourth Quarter

GA 141 & 191 - Stripping and Platemaking I & Stripping and Platemaking and Platemaking Lab I



### Fifth Quarter

GA 211 & 261 - Bindery I & Bindery Lab I

GA 212 & 262 - Stripping and Platemaking II and Stripping and Platemaking Lab II

### Sixth Quarter

GA 221 - Advanced Offset Presswork & General Printing

GA 222 & 272 - Bindery II & Bindery Lab II

## GRAPHIC ARTS COURSE DESCRIPTIONS

### **GA 111 & 161 - Shop Safety and Orientation & Shop Safety and Orientation Lab**

This is a theory and lab combination class which gives students a history of the basic processes of lithography. Shop safety is stressed and students are taught how to properly use shop tools and equipment. College regulations and standards unique to Graphic Arts are discussed.

### **GA 112 - Beginning Typewriting**

Designed for students who have no previous typewriting instruction. This course covers the basics of typewriting such as parts and functions, learning the keyboard, typewriting rules and techniques.

### **GA 113 & 163 - Type Composition and Proofreading & Type Composition and Proofreading Lab**

A study of the various typesetting methods, proofreading typeset material and operation of photo typesetting equipment. Students will apply this knowledge in the shop through assigned projects and demonstrations.

### **GA 114 & 164 - Design, Layout and Job Composition & Design, Layout and Job Composition Lab**

A study of the basic design principles, layout procedures, layout tools and materials, type styles and type faces. Theory lessons are carried into the shop for practical application.



### **GA 121 & 171 - Offset Presswork I & Offset Presswork Lab I**

A study of the principles, history and procedures encountered in offset printing. Equipment maintenance is also included. These lessons are then carried out in the shop through live work projects.

### **GA 131 & 181 - Camera and Developing I & Camera and Developing Lab I**

This is a theory lab combination designed to give an understanding of photographic processes as they relate to Graphic Arts. Darkroom procedures, contact printing, line photography and halftone photography are included.

### **GA 132 & 182 - Offset Presswork II & Offset Presswork Lab II**

Students are taught advanced theories and techniques on the offset press. Lab assignments will be given at a higher level. Advance live work project will be assigned.

### **GA 141 & 191 - Stripping and Platemaking I and Stripping and Platemaking Lab I**

Students will receive instruction in basic stripping techniques including the proper use and care of the required tools. Also covers instruction on types of plates, developing and preserving plates, and troubleshooting the plate. Live work projects will be assigned in the shop to cover these processes.

### **GA 211 & 261 - Bindery I & Bindery Lab I**

An introductory course which covers the basic techniques and equipment used in binding operations. Folding methods, paper cutting, perforating, padding and stitching are stressed. Laboratory experiences are carried out through assigned projects.

### **GA 212 & 262 - Stripping and Platemaking II and Stripping and Platemaking Lab II**

Students will advance into the theory and application of stripping a job requiring spot colors. Live work projects will move from the simple to those that are more complex.



**GA 221 - Advanced Offset Presswork & General Printing**

Students will apply theories and methods learned from previous courses in various live work and shop assignments. This will include roller and pressure adjustments, press troubles, cleaning and oiling, and operation of the offset press.

**GA 222 & 272 - Bindery II & Bindery Lab II**

A continuation of Bindery I theory and application. Principles and methods will increase in complexity.



## MASONRY

### 6 Quarters

Bricklayers are craftsmen who work with masonry materials. These craftsmen construct walls, partitions, fireplaces, chimneys, and other structures from bricks. They also use other masonry materials, such as concrete, cinder blocks, precut panels made of brick cement, tile, stone, or marble. This course endeavors to give students knowledge and skills that will enable them to become efficient workers in the masonry trade.

Bricklayers are employed primarily in the construction industry--residential and nonresidential--and in maintenance, repairs, and alterations.

## MASONRY

### First Quarter

MAS 111 - Orientation and Introduction to Masonry

MAS 113 - Tools and Equipment

MAS 114 - Bricklaying, Jointing, and Pointing Lab

MAS 164 - Bricklaying, Jointing and Pointing Lab

### Second Quarter

MAS 121 - Essentials of Masonry Construction

MAS 122 - Bonding

MAS 172 - Bonding Lab

MAS 123 - Plans and Layout

MAS 173 - Plans and Layout Lab

### Third Quarter

MAS 131 - Foundations and Footings

MAS 181 - Foundations and Footings Lab

MAS 132 - Residential Construction

MAS 182 - Residential Construction Lab

MAS 133 - Commercial Construction I

MAS 183 - Commercial Construction Lab I



#### Fourth Quarter

- MAS 141 - Commercial Construction II
- MAS 191 - Commercial Construction Lab II
- MAS 142 - Residential Chimneys and Fireplaces
- MAS 192 - Residential Chimneys and Fireplaces Lab

#### Fifth Quarter

- MAS 211 - Concrete Masonry I
- MAS 261 - Concrete Masonry Lab I
- MAS 212 - Special Projects and Custom Work I
- MAS 262 - Special Projects and Custom Work Lab I

#### Sixth Quarter

- MAS 221 - Concrete Masonry II
- MAS 271 - Concrete Masonry Lab II
- MAS 222 - Special Projects & Custom Work II
- MAS 272 - Special Projects & Custom Work II Lab

### MASONRY COURSE DESCRIPTIONS

#### **MAS 111 - Orientation and Introduction to Masonry**

Students receive information on shop procedures, safety, and the required books and materials. A general overview is also given on the masonry program and the current job outlook.

#### **MAS 113 - Tools and Equipment**

Theory lessons with practical applications on identifying, use, and safety operations of masonry tools and equipment.

#### **MAS 114 - Bricklaying, Jointing & Pointing Lab**

Covers the fundamentals of laying bricks and other masonry products. Includes a study of the types of bricks, sizes, textures and colors of mortar making materials.

#### **MAS 164 - Bricklaying, Jointing and Pointing Lab**

Practical applications of MAS 114.

#### **MAS 121 - Essentials of Masonry Construction**

A theory class which provides a comprehensive study of the



quality of building materials with emphasis on strength and durability.

**MAS 122-Bonding**

A study of the various bonds and patterns in brickwork.

**MAS 172-Bonding Lab**

Hands on experience which carry out theories and principles studied in the classroom.

**MAS 123-Plans and Layout**

This course teaches the fundamentals of drawing, estimating, squaring, leveling and layout of buildings.

**MAS 173-Plans and Layout Lab**

Students receive practical experience from live work projects.

**MAS 131-Foundations and Footings**

A theory course which includes the basic principles of building construction with emphasis on layout, batter boards, digging footings, pouring concrete, etc.

**MAS 181-Foundations and Footings Lab**

Theory lessons are carried into the shop for practical applications.

**MAS 132-Residential Construction**

A study of the basic components required to construct houses and other smaller units.

**MAS 182-Residential Construction Lab**

Live work projects and shop training relative to principles learned in the classroom.

**MAS 133-Commercial Construction I**

A theory class that prepares students in basic commercial building construction.

**MAS 183-Commercial Construction Lab I**

Practical applications of lessons taught in MAS 133.

**MAS 141-Commercial Construction II**

Advanced lessons are taught on the major phases of commercial building.



**MAS 191-Commercial Construction Lab II**

Practical applications for MAS 141.

**MAS 142-Residential Chimneys and Fireplaces**

A theory class which includes a study of the basic components of chimney and fireplace construction in houses. Conventional and manufactured units are studied.

**MAS 192-Residential Chimneys and Fireplaces Lab**

Students will receive actual experience in building chimneys and fireplaces in the shop and in the community from live work projects.

**MAS 211-Concrete Masonry I**

A theory class which provides students with the essentials of laying concrete block units.

**MAS 261-Concrete Masonry Lab I**

Practical applications of theory learned in MAS 211.

**MAS 212-Special Projects and Custom Work I**

An introduction to designing and laying custom masonry work. Included are the principles of constructing barbecue pits, arches, terra cotta, tile construction and glass blocks.

**MAS 262-Special Projects and Custom Work Lab I**

Practical applications of MAS 212.

**MAS 221-Concrete Masonry II**

A continuation of MAS 211 that is designed for the advanced student.

**MAS 271-Concrete Masonry Lab II**

Students receive practical training in the shop and from live work projects.

**MAS 222-Special Projects & Custom Work II**

A continuation of MAS 212 designed for the advanced student.

**MAS 272-Special Projects & Custom Work Lab II**

Advanced shop training and live work experience that will enable the student to become skillful and efficient.



## PLUMBING AND PIPEFITTING

### 6 Quarters

Plumbers and pipefitters are craftsmen who install, repair and maintain plumbing systems. This occupation is one of the most highly skilled of the building trades. Job opportunities are excellent in this field in view of present and anticipated construction activity, which not only include erection of new structures, but the alteration and modernization of existing structures.

Although plumbing and pipefitting are sometimes considered to be a single trade, a worker can specialize either in one craft or the other, particularly in large cities. Water, gas and waste disposal system, especially those connected to public utility systems, are installed by plumbers. These installations are made in residential and commercial buildings, schools, industrial plants and other structures. Plumbers and pipefitters use a variety of skills in installing pipe systems. They bend, weld, braze, caulk, solder and thread joints. They use wrenches, reamers, drills, braces and bits, hammers, chisels, saws and other hand tools. Hand operated hydraulic pipe benders are also used.

An apprentice achieves journeyman status after a five-year apprenticeship or on-the-job training. A worker must pass a state examination and obtain a license before he can become a journeyman. Some journeymen plumbers and pipefitters may become foremen for plumbing or pipefitting contractors. Many journeymen go into business for themselves. As they expand their activities, they may employ other workers, and become plumbing and pipefitting contractors.

## PLUMBING AND PIPEFITTING

### First Quarter

PLB 111 - Introduction to Plumbing

PLB 112 - Construction Safety

PLB 113 & 163-Materials and Tools of the Plumbing Trade



### Second Quarter

PLB 121 - Plumbing Joints and Supports

PLB 122 - Traps, Clean Outs and Vents

PLB 123 & 173-Sanitary Systems I & Sanitary Lab I

### Third Quarter

PLB 131 - Introduction to Blueprint Reading

PLB 133 & 183-Sanitary Systems II & Sanitary Systems Lab II

PLB 134 & 184-Potable Water & Potable Water Lab

### Fourth Quarter

PLB 141 & 191-Installation of Plumbing Fixtures & Installation  
of Plumbing Fixtures Lab

PLB 142 & 192-Introduction to Oxy-Acetylene Cutting & Welding

PLB 143 & 193-Construction Blueprint II & Construction  
Blueprints Lab II

### Fifth Quarter

PLB 281 - Residential Plumbing Blueprints

PLB 211 - Introduction to Gas and Process Piping

PLB 212 & 262-Oxy-Acetylene Welding and Brazing II

### Sixth Quarter

PLB 221 & 271-Introduction to Arc Welding & Arc Welding Lab

PLB 282 - Commercial Plumbing Blueprints

## PLUMBING & PIPEFITTING COURSE DESCRIPTIONS

### PLB 111-Introduction to Plumbing

Introduces new plumbing students to the basic systems involved in "plumbing." The course also presents a historic overview of the craft and explains the modern Apprentice-Journeyman-Master relationships.

### PLB 112-Construction Safety

An introductory module in shop and construction job site



safety. This course includes personal safety, proper material handling, machine and welding safety and explains the duties of each employee in maintaining a safe work environment.

### **PLB 113 & 163-Materials and Tools of the Plumbing Trade**

This is a theory/lab module that introduces the various types of pipe used in the plumbing trade and their general application. Emphasis is placed on currently used equipment.

### **PLB 121-Plumbing Joints and Supports**

This module presents the basic methods of joining pipe and fitting in the major plumbing systems. Emphasis is placed on modern methods.

### **PLB 122-Traps, Clean Outs, and Vents**

This module presents the SSGC requirements for vents, traps, and clean outs and how vents affects the hydraulic and pneumatic action of drain lines.

### **PLB 123 & 173-Sanitary Systems I & Sanitary Lab I**

This theory/lab module introduces students to the installation of sanitary drainage pipe. Primary emphasis is given to wood construction.

### **PLB 131-Introduction to Blueprint Reading**

This module presents the basic elements of interpreting blueprints and working drawings.

### **PLB 133 & 183-Sanitary Systems II & Sanitary System Lab II**

A continuation of PLB 123 that includes masonry construction. This module also presents theory and application of sizing and system design.

### **PLB 134 & 184-Potable Water & Potable Water Lab**

An introduction to the installation of drinking water including copper and plastic applications.

### **PLB 141 & 191-Installation of Plumbing Fixtures & Installation of Plumbing Fixtures Lab**

A theory/lab module that presents the correct techniques for setting, aligning, and testing plumbing fixtures.



**PLB 142 & 192-Introduction to Oxy-Acetylene Cutting & Welding**

An introductory module that includes the theory and application of flame cutting. This module also presents the operation of welding related tools.

**PLB 143 & 193-Construction Blue Prints II & Construction Blue Prints Lab II**

A theory/lab module that applies the theory of PLB 131 to practical blue print reading.

**PLB 281-Residential Plumbing Blue Prints**

This module applies basic blue print reading skills learned in PLB 131 to residential plumbing projects. It allows the student to supervise the PLB 123 student's installation.

**PLB 211-Introduction to Gas and Process Piping**

This module includes SSBC gas regulations and practical applications.

**PLB 212 & 262-Oxy-Acetylene Welding and Brazing II**

An advanced gas welding course that re-enforces the safety principles of PLB 211 and presents the theory and application of gas welding, brasing, and silver soldering.

**PLB 221 & 271-Introduction to Arc Welding & Arc Welding Lab**

An introduction to electric welding techniques as used in pipefitting; includes Stick, MIG, and TIG information.

**PLB 282-Commercial Plumbing Blue Prints**

This module applies blue printing skills developed in all previous blue print classes to a masonry construction project. The advanced student will make necessary working drawings and supervise basic student's installation.

**OPTIONAL MODULES**

**PLB 231 & 281-Rural Plumbing & Rural Plumbing Lab**

This module is designed for students from rural communities. It includes well pump and septic tank installation and repair.



### **PLB 232 & 282-Boiler Fireman I & II and Boiler Fireman Lab I & II**

A two quarter introduction to steam boiler modules intended for students desiring to work in a plant environment. Includes basic equipment and maintenance. This course involves live work on boilers.

### **PLB 233-Code Intensive Module**

This module is designed to prepare advanced plumbing students to understand the Tuscaloosa Journeyman's Examination.

### **PLB 234-Plumbing Estimating**

A theory class that introduces plumbing students to business practices. It is designed for students that wish to operate their own plumbing businesses.

### **PLB 235 & 285-Systems Repair & System Repair Lab**

This module is intended for students with career goals that are service oriented. Application of advanced theory is carried out in fixture repair, sewer and water pipe maintenance, and heating equipment repair. Additional theory lessons are studied and applied to live work projects.

## **RELATED INSTRUCTION**

### **PLB 286-Introduction to Electricity**

Presents basic electric wiring of plumbing appliances and electric safety on the job site.

### **PLB 287-Space Heating**

A survey module in methods of building, heating and cooling.

### **PLB 288-Alternate Energy**

A survey module of new energy sources used, installed, or repaired by plumbers.

### **PLB 289-Related Science**

A module designed to present practical application of science to plumbing students.

### **PLB 290-Business Practice I**

A survey course intended to give plumbing students an overview of construction business practices.



## **RADIO AND TELEVISION REPAIR**

### **8 Quarters**

The length of the course is 24 months. This time is divided between classroom theory and shop practice. Shop conditions are set up very similar to those which are encountered in the field. Many students find part-time employment in the trade while they are still in school.

The course objectives are to help the student gain knowledge and understanding in the fundamentals of electronics and both simple and complex radio and television circuits, acquire skill in the use of hand tools and test equipment in the repair of radio and television receivers and other electronic devices, and to develop a proper attitude toward his work, his fellow workers, and his superiors.

## **RADIO AND TELEVISION REPAIR**

### **First Quarter**

RTV 101 - Basic Electricity—DC

RTV 151 - Basic Electricity-DC Lab

### **Second Quarter**

RTV 121 - Basic Electricity-AC

RTV 171 - Basic Electricity—AC Lab

### **Third Quarter**

RTV 131 - Basic Electronics

RTV 181 - Basic Electronics Lab

### **Fourth Quarter**

RTV 141 - Radio Receiver & Audio Systems

RTV 191 - Radio Receiver & Audio Systems Lab

RTV 142 - Circuitry



### Fifth Quarter

RTV 211 - Principles of Black & White Television

RTV 261 - Principles of Black & White Television Lab

### Sixth Quarter

RTV 221 - Black & White Television II

RTV 271 - Black & White Television Lab II

### Seventh Quarter

RTV 231 - Color Television I

RTV 281 - Color Television Lab I

### Eighth Quarter

RTV 241 - Color Television II

RTV 291 - Color Television Lab II

## RADIO AND TELEVISION COURSE DESCRIPTIONS

### **RTV 101-Basic Electricity—DC**

An introductory course that acquaints the student with the sources of electricity as related to direct current. Students develop knowledge in electrical measurements and basic meter movements. Safety skills and principles are stressed.

### **RTV 151-Basic Electricity—DC Lab**

Practical applications in the laboratory of the principles and concepts learned in the classroom.

### **RTV 121-Basic Electricity—AC**

A study of the basic theories and operations of alternating current. Classroom instruction will emphasize the relationship and characteristics of waveforms, inductors, capacitors, impedance and resonance. Safety practices again emphasized.

### **RTV 171-Basic Electricity—AC Lab**

Laboratory work parallels classroom instruction and activities.



**RTV 131-Basic Electronics**

A combination theory/laboratory class that introduces the student to solid state devices, electrons, rectifiers, amplifiers, oscillators and other major practices that are related to a complete understanding of the course.

**RTV 181-Basic Electronics Lab**

Applications of the above course in conjunction with the theories and concepts learned in RTV 121 & 131.

**RTV 141—Radio and Audio Systems**

This course develops the student's knowledge of block diagrams, AM & FM antennas, amplifiers, converters, detectors and demodulators.

**RTV 191-Radio Receiver & Audio Systems Lab**

Through live work projects that are brought into the shop, the students receive practical experience in the principles and concepts studied in the classroom.

**RTV 142-Circuitry**

A theory and lab combination course that provides the student with basic and advanced principles and applications of electric, series, parallel and combination circuits.

**RTV 211-Principles of Black & White Television**

A complete study of the history of the black & white television systems used in the United States. Students will be introduced to technical terms and taught how to indentify the major parts of the black & white television.

**RTV 261-Principles of Black & White Television Lab**

This course is the practical application of RTV 211.

**RTV 221-Black & White Television II**

A continuation of RTV 211 which emphasizes picture and sound systems. Students will gain knowledge in the various operations and processes of video detectors and amplifier systems, AGC systems, tube and solid state sound systems, tuners, antenna systems and oscilloscopes.



**RTV 271-Black & White Television Lab II**

Practical application of RTV 221. The student will make repairs on black & white televisions that are brought into the shop as live work.

**RTV 231-Color Television I**

A study of the color television systems followed by major theories and concepts of monochrome circuitry.

**RTV 281-Color Television Lab I**

Students will receive experience in repairing color televisions that are brought into the shop by students, employees and other qualified persons. These repairs are related to the concepts studied in RTV 231.

**RTV 241-Color Television II**

A continuation of RTV 231 that advances to color circuitry. The student will develop concepts and operations related to CRT circuits and adjustments, vertical deflection systems, horizontal deflection systems, video I.F. systems, UHF & VHF tuners, color demodulators, band pass, matrixing and color synchronization.

**RTV 291-Color Television Lab II**

The laboratory work closely parallels the principles and techniques learned in the classroom. The repairs are more technical than those made in the previous class.